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# REPORT

ON

## THE MEDICAL TOPOGRAPHY AND STATISTICS

OF

**COORG.**

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COMPILED FROM THE RECORDS

OF THE

**MEDICAL BOARD OFFICE.**

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PUBLISHED BY ORDER OF GOVERNMENT.

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# COORG.

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## COORG.

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Situation, boundaries & extent.

The principality of Coorg, or *Kodoogoo* as it is called by the natives, is situated in the line of the western ghauts, between latitude  $12^{\circ}$ , and  $12^{\circ} 52'$  North, and longitude  $75^{\circ} 30'$ , and  $76^{\circ} 10'$  East; its dimensions are, length 58 miles, and greatest breadth 25 miles; it however varies in breadth considerably, and on a rough computation, its surface may be stated to be about 1420 square miles. It is bounded on the north and east by Mysore, on the south by Wynaad, and on the west by Malabar and South Canara, which are interposed between it and the sea; its distance from which is in most places about 45 miles. It is strictly speaking a mountain region, the lowest part being elevated not less than 3,000 feet above the sea.

General description of the country.

The entire country consists of a succession of lofty narrow ridges having valleys of various extent between them, the ridges, lie parallel to each other, commencing in general with a steep abutment to the westward, and running in the general direction of the western ghauts, viz. from north-west to south-east, until they terminate in the plains of Mysore and Wynaad; of these numerous ridges the following are the most remarkable.

The first to the north-ward rises above the Bizlee ghaut, and terminates at the Cauvery, near RamasamyConawah, and is of no great elevation; it separates the districts of Yelloosserza-shee-mee to the north, from the rest of Coorg.

Next to this, with the table land of Somwarpett intervening, is a ridge, the western extremity of which commences by a remarkable bluff peak of considerable elevation, called Poopayherry or Soobramuny, well known as a land mark; and which is regarded with superstitious veneration, the natives of the country considering it unlucky to ascend it, ex-

cept as a penance to wipe away sin. The scenery round its base is bold, rocky and grand, and towards Somwarpett, it becomes exceedingly picturesque, forming a succession of beautiful grassy downs, open glades, and clumps of forest trees, resembling the finest park scenery in Europe.

The next ridge in succession has three rather marked rocky peaks, the sides of which slope abruptly to the north and south, into two deep valleys, through which run the branches of the Haringhee river; the scenery here is also very pleasing.

After this comes the table land of Merkara, which is terminated on the south by a sharp declivity of 5 or 600 feet, forming the northern boundary of the great valley between Merkara and Nakanaad; it is about 18 miles in length by 13 in breadth, and consists of a succession of low narrow ridges, with fertile valleys interposed; the lowest, being nearly in the centre, forms the bed of the river Cauvery. At the north-west angle of this valley there is a break in the line of ghauts, forming what is called the Sumpajee valley, which leads by a gradual slope into the low country. The southern termination of the valley however, becomes abrupt, a ridge in this direction rising suddenly to the height of about 1000 feet; and on the west it plunges still more suddenly into Malabar, by a fall of between 4 and 5000 feet. It presents sundry peaks the most remarkable of which is Tadiandamole, the highest in Coorg.

A continuation of the valley to the south-east, leads into the talook of Kiggutnaad, which is of considerable extent, but much overgrown with jungle; and further to the south-east rise the Brummagherry mountains, forming the boundary of the country in this direction; they are of considerable elevation, covered with forest trees, and abound in game; like the other mountains of Coorg, the ridge on the top is very narrow.

The general aspect of the country varies considerably in the different talooks. In the vicinity of Somwarpett, the hills are gently rounded, alternating with sloping glades, inter-

spersed with clumps of forest trees; near Merkara the hills are closer together, and more abrupt, the ravines deeper, and more wild, and the jungle in the hollows much thicker.

South of Merkara the country appears covered with wood, the only naked spots being the narrow cultivated valleys between the ridges; on descending into it however, it is found to contain numerous open spaces, the woods being neither dense, nor lofty. Kiggutnaad is thickly wooded, and the whole eastern frontier of the country bordered with jungle more or less dense, varying in breadth from 8, to 15 miles, and communicating with the jungles of Wynaad, and Mysore.

The scenery along the ridge of the ghauts to the westward is very beautiful, and though less rocky and grand than that of the Neilgherries, it is bold and varied in a high degree, the vegetation being of the richest description, and the forest trees of magnificent growth.

The valleys between the ridges, though varying in extent and relative depth, from having the same *general* direction,—i. e. from north-west to south-east,—as the monsoon winds, the temperature of the country is thereby considerably moderated, and rendered equable.

Cuddinegs. or  
Breastworks.

A remarkable feature of the country, and which attracts the attention of the most casual observer, is the number and extent of the *Cuddinegs*, or breastworks, which surround and intersect it in every direction. Their total linear extent,—being in many places, double, triple or quadruple—cannot be short of 5 or 600 miles; and when it is stated, that they are generally from 15 to 25 feet high, with a ditch in front of 10 feet deep, by 8, or 10 wide, some idea may be formed of the labour bestowed in their formation. The natives are entirely ignorant of the period of their construction, and of the purposes for which they were intended, generally attributing them to the *Pandeoos* or sons of Siva. That they are the works of a very remote antiquity is evident from the loss of all tradition regarding their uses, as well as from the more unequivocal testimony of enormous trees, probably the

growth of ages, which are found springing out of the walls. No satisfactory reason for their construction has yet been assigned; defence could not have been the only object, as they face one another in certain places, and in others, three or four ranges are found directly behind each other.

Subjoined are the elevations above the sea, of some of the more remarkable points in Coorg.

|  |      |       |
|--|------|-------|
| Poopatherry.....                                 | Feet | 5,682 |
| Tadiandemole near Nakanah.....                   | „    | 5,781 |
| Merkara (B. W.).....                             | „    | 4,506 |
| Nakanaad palace (B. W.).....                     | „    | 3,797 |
| Soorlaby, northern range (B. W.).....            | „    | 4,527 |
| Bittatoor table land, (W. S. W. of Merkara)      |      |       |
| (B. W.).....                                     | „    | 4,824 |
| Veerajunderpett palace (B. W.).....              | „    | 3,399 |
| Highest point of great road from Merkara to Fra- |      |       |
| zerpett (L.).....                                | „    | 4,781 |
| 3 mile stone Do. (L.).....                       | „    | 4,500 |
| Bhoeekerry hill Do. (L.).....                    | „    | 4,500 |
| Frazerpett Do. (L.).....                         | „    | 3,200 |
| Colour Betta (near Frazerpett) (L.).....         | „    | 4,500 |

#### Rivers

The principal river of Coorg is the Cauvery, by means of which and its tributaries, nearly four-fifths of the country is drained. The only river of considerable size flowing to the westward, is the Burrepollay, which rises in Kiggutnaad, and descending abruptly through a series of deep and rocky ravines, in one of which it forms a superb cascade 2 or 300 feet high, flows along the base of the hills, by the Huggala ghaut, where it is known as the stony river, and disembogues itself into the sea a few miles north of Cannanore.

The Cauvery rises near the top of a hill, on the very verge of the western ghauts, and descending through the great valley between Merkara, and Nakanaad, makes a sudden turn to the north, and flows for 20 or 30 miles along the

(B. W.) ascertained by boiling water, (L.) by levels taken in constructing the new road.

eastern frontier, receiving in its course several large tributaries, the principal of which is the Soornauretty, or Haringhee, which drains the northern half of the country, and enters the Cauvery between Frazerpett and Ramasamy Conawah. Another large tributary of the Cauvery is the Litchman-tieth, which rises at the foot of the Brummagherries, flows north-east into Mysore, and joins the Cauvery close to Hoonsoor.

The Cauvery is not rapid in any part of its course through Coorg, and its current is in general tranquil, except at a few places where it traverses beds of granite rock; it is fordable at almost all points in the dry season, but during the monsoon at Frazerpett, where it is 225 feet wide, it rises to the height of from 20, to 30 feet.

**Morasses.** There are no lakes in any part of Coorg, and but few morasses or bogs, except on the site of deserted rice fields, from which however no noxious exhalations appear to arise.

**Climate.** The temperature of Coorg is moderate and equable, the daily range of the thermometer within doors, not exceeding  $6^{\circ}$  or  $8^{\circ}$ , often not more than  $2^{\circ}$ ; the Thermometric ranges. thermometer seldom rises higher than  $74^{\circ}$ , or falls below  $60^{\circ}$ , in the open air. The range is a little higher during the dry season, when the daily extremes are from  $52^{\circ}$  or  $53^{\circ}$ , to  $68^{\circ}$  or  $70^{\circ}$ ; the annual extremes are probably  $52^{\circ}$ , and  $82^{\circ}$ .

**Barometrical observations.** The maximum height of the barometer occurs during the dry season, when the mercury stands at 26.220, and the lowest in July, during the monsoon, when it falls to  $25^{\circ}.912$ . The greatest daily range observed has been, 076'; the mean daily range, which is very regular being 050. The diurnal maximum occurs at 10 A. M. and the minimum at 5 P. M., with such regularity, that errors in the supposed time, have often been detected by reference to the barometer. This instrument however offers no indication of approaching changes of weather, nor has it been observed to be influenced by the lunar phases.

**Hygrometer.** The hygrometrical state of the atmosphere, during half the year, is that of extreme moisture, closely approaching to saturation. During the hot season it is occasionally very dry, and sometimes undergoes most remarkable fluctuations without evident cause, and without any perceptible difference either to the eye, or to the feelings.

Detailed observations on climate.

A few detailed observations on the climate, at different seasons of the year, are here given.

The months of January and February are cold, and excessively dry, the range of temperature being from  $53^{\circ}$ , to  $70^{\circ}$ , or  $72^{\circ}$ ; the mornings and evenings are to the feelings very cold, while the heat of the sun, in the middle of the day, is tempered by a constant cool breeze, from the north-east, which frequently blows with such violence, as to raise clouds of dust, and become unpleasant.

In March, the cold of the nights becomes less sensible, and the days are warmer, while the wind is less violent, the air still continues in general dry, but fluctuates considerably in this respect.

April and May are usually very pleasant months, the heat of the day which begins to be oppressive out of doors, being tempered by frequent heavy showers, and thunder storms; occasionally, though rarely, the air is close, but the nights are almost always cool.

In June, the monsoon sets in, and at the commencement is seldom violent, but about the end of the month the rain frequently falls in torrents. Between the 22d and 27th of June 1835, there fell twenty seven inches of rain, nearly equal to the aggregate annual fall in England; rain continues during July, August and September, the air becomes loaded with moisture, the sun is seldom seen; and when it ceases during short intervals, a dense fog usually prevails. The temperature at this season is wonderfully equable, the extremes of the thermometer in the open air, being  $56^{\circ}$ , and  $65^{\circ}$ .

In October, an interval of bright and beautiful weather generally occurs, rendered the more delightful by contrast,

and by the intense green of the luxuriant vegetation ; about the commencement of the month the wind sets in from the north-east, and when strong, is piercingly cold.

November is an unpleasant month, the weather being blustery, cold and showery, and there are frequent cold heavy fogs.

In December, fogs are prevalent, but towards the end of the month the weather becomes settled, when it is clear and cold, the mornings and evenings being intensely cold to the feelings.

Salubrity of the  
climate for Euro-  
peans.

As respects the very important point of health, there can be no hesitation in stating, that the climate of Coorg appears to be well adapted to the European constitution, provided there exists no tendency to visceral congestion.

In the great majority of Europeans, the equability of the temperature,—the average of which  $60^{\circ}$ , is that generally considered most favorable to health—the coolness of the nights, and, the advantage of being able to take exercise in the open air at all hours, during a considerable portion of the year, exert a most beneficial influence as regards health, strength and appearance ; European children are likewise strong and healthy. No slight proof of the congeniality of the climate for Europeans, is the fact, that dogs of the European breed, thrive remarkably well in Coorg, and are exempt from many diseases common to them even in southern Europe.

To the same cause, equability of temperature, the comparative immunity from rheumatic affections, coughs, colds &c. which is here enjoyed, may be attributed ; although the atmosphere is, throughout a great part of the year, loaded with moisture.

Diseases which  
become ag-  
gravated by  
the climate  
of Coorg.

Certain complaints such as asthmatic affections, are generally aggravated by a residence in the upper parts of Coorg, and the rarefaction of the air may probably be sufficient to account for this cir-

cumstance; chronic affections of the liver, are also apt to put on a more formidable appearance, partly from checked perspiration, in the damp cold seasons of the year, and the want of exercise during the monsoon; in dysenteric complaints when the tone of the intestinal canal has been much impaired by the disease, great care is necessary to prevent diarrhœa supervening, which is at all times obstinate, and frequently resists every means of cure, unless change of climate is restored to; Frazerpett is of great advantage in this respect, affording a considerable change, within a short distance.

Effect of climate on Natives of the Country.

Natives of the low country suffer a good deal, on first arriving in Coorg, from fever of the intermittent type and bowel complaints, occasioned in a great measure by their being imperfectly clothed, by sleeping on the ground, and indulging in the use of raw vegetables; on becoming acclimated however, they enjoy as good health as in the most favorable parts of the low country, and strange as it may appear, the monsoon season seems to agree best with them.

A few casualties which have lately occurred, have been principally from congestion of the lungs, always a formidable complaint in natives; the climate appears decidedly inimical, to the cure of cuts, wounds and sores, which are often totally unmanageable, without change of air. This is a peculiarity it is believed of other moist climates of India; such as the coasts of Malabar, Bombay, Aracan, and Tenasserim.

The tables appended contain an abstract of a daily atmospheric register kept with but little intermission, from 1st June 1835, to the 31st May 1837, and though imperfect from unavoidable circumstances, will suffice to give a general idea of the climate. See table at the end of the report.

Geological features of the country.

The geological formation of the country in the vicinity of Merkara, bears a close resemblance to that of the Neilgherries as described by Dr. Benza.\* The

\* Journal of Madras Asiatic Society No. 13, page 241.



rocks are primitive, consisting mostly of sienite, occasionally traversed by green stone, the whole being covered with a thick cap of lithomargic earth, composed of felspar in various stages of decomposition, the agglutinating basis being argillaceous earth, coloured by oxide of iron. In some places the agglutination is so complete as to form laterite, or soap stone, and the whole is traversed by veins of quartz, and of nearly pure felspar; the latter also occurs totally decomposed, in which state it is commonly called porcelain earth, and is used as a white wash for houses, and for cleaning soldier's belts &c.

The greenstone traverses the sienite at several places to the south of Merkara, but the section is imperfectly seen, it is of a very hard texture and receives a beautiful polish, and is occasionally found with minute crystals of pink felspar interspersed through it, but these disappear in the polishing; the section presents a uniform smooth surface, of a dark-blackish green colour\*. The sienite is an admirable building stone, but its hardness renders it too expensive for common use.

Immediately over the lithomargic earth, is a stratum varying greatly in thickness, of rich vegetable mould, resulting from the decomposition of the luxuriant vegetation with which the whole country is clothed, during the greater part of the year; on the edges and slopes of the hills this stratum of earth is comparatively thin, but in the valleys and hollows into which it is washed by the heavy rains, along with a vast quantity of heterogeneous detritus, it accumulates to a great thickness, and forms a soil of great fertility, producing, with very little assistance from manure, returns of from 50, to 80 fold.

**Water.** Water is in general of good quality, but during the monsoon it is necessarily charged with considerable quantities of silt and mud, washed down from the higher grounds.

\* A small slab of this description found in the palace at Merkara, is said to have been used as a mirror; some large blocks (4 feet by 2, and 6 or 8 inches thick) were made into couches, which at the sale of prize property produced large prices.

Causes of fever  
and bowel com-  
plaints.

The climate in many places, for two months previous to the setting in of the monsoon, when frequent heavy showers fall, is more or less unhealthy,\* and fever and bowel complaints prevail to some extent, which the natives attribute to the mixture of the old and new waters as they express it; and there can be no doubt, that the first portions of water which percolate through the ground, after a long period of dry weather, becoming charged with saline particles, and decaying animal or vegetable matter, must be more or less deleterious. Europeans are more in the habit of attributing epidemics to noxious exhalations, but it is difficult to account, on the score of malaria alone, for the season preceding the monsoon being the most unhealthy, in the south of India, while in Candeish, the *terraie* of Bengal &c. the close of the rains is the most sickly season.

The period at which the military suffer most is the dry weather, evidently from exposure to the greater variations of temperature, which occur in that season, and to which their duty as guards and sentries at night subjects them.

Their febrile complaints however never put on the malarious, or intermittent type, and are rarely dangerous except when complicated with pulmonary affections.

Botany of Coorg. The botany of Coorg is as yet an unexplored field, and would amply repay the attention of a competent observer.

Rice. Rice which forms the staple article of the country, is of a coarse quality and not esteemed in Mysore or to the eastward, three varieties of it are produced, and the principal market for the surplus which is considerable is Malabar.

Raggy. Raggy is cultivated in the lower parts of the country, to a considerable extent; in the upper country, it

\* Particularly in Kiggutnaad, and the jungles on the eastern border of the country where fevers are so prevalent at this season as to be called Rog or Epidemic. The same is the case in the jungles surrounding the base of the Neilgherries.

is confined to patches of ground on the slopes of the hills, from which the jungle has been cleared, and the grass burnt for manure ; only one crop is raised, after which the ground is allowed to lie fallow for some years, before being cultivated, when the same process is again repeated.

**Tobacco.** Tobacco of an inferior sort, is grown in small quantities, as also hemp, ginger and turmeric for domestic uses ; coffee grows wild on the eastern border, and might be much improved.

**Cardamoms.** Cardamoms are found in great abundance and of good quality, in the jungles, along the western slope of the ghauts, and produce a considerable revenue ; the wild nutmeg is also very common.

**Sandal wood.** Of the more important productions of the jungles, may be enumerated sandal wood, produced chiefly on the eastern border of the country.

**Teak wood &c.** Teak wood grows on the malabar side of the ghauts, also chunpuree, blackwood, darcheenee, and many other valuable timber trees.

**Cucurbitaceous plants.** Cucumbers and most plants of the cucurbitaceous tribe grow luxuriantly, and there is no doubt that almost all European vegetables, and some fruits, might be brought to perfection in various parts of the country.

**Domestic animals.** Of the domestic animals found in Coorg, the bullock is much the most common ; it is of a small breed, and does not thrive in the upper country ; the same is the case with sheep ; but goats thrive better ; horses are only kept by a few people of the higher ranks.

**Wild animals.** Of the numerous wild animals, the most remarkable is, the elephant, large herds of which are found in all the jungly parts of the country, and they often do much injury to the crops. They are occasionally killed by large

parties of hunters assembled for the purpose, and since a reward for destroying them has been granted, numbers are shot annually by individual sportsmen. They are occasionally caught in pits and tamed, but are considered inferior to those of Ceylon, or Bengal.

Tigers are frequently met with, as are also cheetas and tiger cats; they appear to lose much of their ferocity in this climate, and seldom attack a man unless wounded.

Bears are comparatively rare; they appear to resemble those found on the Neilgherries, but differ from them in one remarkable particular, being exceedingly fierce, and more dreaded by the Coorgites than tigers.

The wild dog *ken-nai*, *sonakoota*, or *d'hole*, is frequently met with in packs of ten or twelve; they are as large as a greyhound, stronger built, and very fierce, they have been known to attack bullocks.

Several species of martens, polecats and weasels are met with.

The samber or elk is common in the more retired jungles, and the animal is hunted for its flesh, which is esteemed by the natives.

The bison as it is called is common on all the mountain ridges, where it attains to the enormous size of 17 hands high, and upwards.

The muntjak (*cervus muntjak*, of Cuvier) or jungle sheep, as it is sometimes called, is not uncommon, but is shot with difficulty from its frequenting the thickest coverts; it is distinguished by having canine teeth in the upper jaw, and hair covered bony processes on its skull of about four inches in length, on which the horns are supported, its flesh is much esteemed. The memina, or mouse deer is occasionally seen; its flesh is also considered a delicacy. The cheetul or spotted deer, and wild hog, and large sized hares are found in great

numbers, in the more open parts of the country. The woods are tenanted by troops of monkeys, and squirrels; of the latter there are three or four varieties.

**Birds.**

Of the feathered tribe, the most remarkable are, the wood-cock, which is comparatively rare, and evidently migratory; the snipe, found in considerable numbers, jungle and spur-fowl, several species of cranes; Pigeons are also numerous, including the imperial pigeon, blue pigeon, the green dove a beautiful bird, and the common dove. Falcons and hawks are numerous, as are also one or two descriptions of eagle; wood-peckers exist in great variety, and of the most beautiful plumage. The *baceros rhinoceres*, or hornbill, of two or three varieties is found common in all parts of the country.

**Fish.**

The Cauvery and its tributaries are well stocked with fish, which do not differ from those found in the rivers in the low country.

**Reptiles.**

Among the reptiles are great numbers of lizards, several species of snakes, two or three of which are venomous. The cobra-de-capelle is not uncommon in the lower parts of the country; a snake of a beautiful pea-green colour with black spots, is found near Frazerpett, which is provided with poison fangs, and is said to be deadly. The bite of a species of snake found in Kiggutnaud is said to produce extensive ulcers, which are difficult to heal; scorpions and centipedes are not common; alligators are occasionally seen in the Cauvery.

The jungle leech must not be omitted to be mentioned, being one of the greatest pests of the country; after the first showers of rain on the setting in of the monsoon, it is impossible to quit the road for any distance without being covered by numbers of minute leeches, about an inch long, and not thicker than a hair, which quickly insinuate themselves under the clothes, and fasten on the skin, their bites often producing great irritation; they disappear again in the dry weather, but even then, the unwary intruder into

shady nooks, if moist and covered with leaves, is often punished for his temerity.

*Insects.* The entomology of Coorg if explored would doubtless be found rich and interesting. Silk worms are not bred; bees are seen in vast numbers, and a considerable quantity of wild honey and wax are found in the woods.

*Roads.* Previous to the occupation of the country by the British in 1834, the roads were in a primitive state, wholly impracticable for wheeled carriages, and scarcely less so for bullocks, it having been part of the policy of the Rajahs, to render their country as little accessible as possible, from an idea common to mountaineers in all parts of the world, that the chance of invasion and conquest, was thereby diminished, and which to a certain extent, is undoubtedly true; for the same reason some of the more direct, and practicable lines leading to Merkara the capital were shut up, and travelling by them prohibited.

The only track, which was entitled to the name of a road, commenced at Periapatam, passed through a thick jungle to Veerajunderpett, and led by a very steep pass, known as the Huggala, or Hinghin ghaut to Cannanore; this road was constructed by a party of pioneers, some years ago, but the pass is so steep as to be nearly impracticable for bullocks, or horses, and totally so for any other species of carriage,\* and is in fact the worst ghaut in the south of India; the part of the road between Periapatam and the top of the pass, is better constructed, and with little trouble, might be made practicable for carriages; but the ghaut, and the road for eight miles from the foot of it towards Cannanore, is not capable of much improvement. This and the next mentioned road formed the line of advance of the southern column of the attacking army.

From Veerajapett† a cross road leads N. N. W. to Merkara 22 miles; this is also nearly impracticable in the wet sea-

\* The declivity is in many places 1 in 3, seldom less than 1 in 4; the Ghaut is nearly 5 miles long.

† 1,100 feet lower than Merkara.

son for bullocks, and totally so at all times, for carriages, passing as it does over the ridges of all the intervening hills. On reaching the base of the table land of Merkara, here about 600 feet high, it ascends by a very steep, but well made road, the declivity of which is 1 in  $3\frac{1}{2}$ , or 4 feet ; an improvement on this line is in contemplation, and partly executed by the superintendent of Coorg, which by following the prolongation of one of the ridges, accomplishes the descent at the rate of 1 in 13 or 14 feet ; and effects besides a great saving of distance.

From the bottom of the last mentioned ghaut, or pass from the Merkara table land, branch roads lead to Nakanaad palace, 18 miles, and to Talla Cauvery, the source of the Cauvery, 20 miles ; they are of the same description, as the Veerajapett road, exhibiting a contempt for all the acknowledged principles of road making. From Talla Cauvery there is a tolerably easy but very long pass into Malabar, called the Thorakana ghaut.

At Periapatam commences another road, leading through thick jungle to Nunjerajpett, near the Cauvery, and thence to Merkara. This though traversing sundry steep acclivities, and descents, was formerly much the most practicable and frequented way of access, but is now totally disused.

From Merkara westward, a foot path leads to the edge of the table land 12 miles, descends by a very steep pass called the Talnair or Kurrunkall ghaut, 3 miles long, barely practicable for bullocks, and thence through thick jungle to Bellarypett, and by Pootoor to Mangalore ; by this line the north-west column of attack was to have advanced, but got no further than Bellary-pett.

A road leading north from Merkara, branches off into one running north-east, by Hallary to Ramasamy Conawah, by which the principal column entered the country ; and a second by Jumboor Bucka—at which latter place the north

column was repulsed—Somwarsunta, and Coodlipett, into the Mysore district of Munjerabad.

The whole of these, are in most parts little better than mere foot tracks, full of stones, and ruts, passing over the steepest acclivities, without an attempt to avoid, or render them less steep by zigzags, or turns, and in short in the very rudest state.

Since the occupation of the country by the British, an excellent road has been made by the corps of sappers and miners, from the frontier of Frazerpett,\* on the Cauvery,—where it communicates through Periapatam or Betundapoor, with the great road to Bangalore—as far as Merkara; it is 25 feet wide throughout, and in every respect admirably constructed; the slopes where occurring, rarely exceeding 1 foot in 14 or 15, but are generally much less.

The advantage of a good road in a military point of view, was perhaps never more apparent, than on a late occasion during the insurrection in Canara, where a field battery of foot artillery, with guns, train &c. marched with ease in six hours, from the frontier to Merkara; the force when entering the country in 1834, by nearly the same line, having been four days in performing the distance.

The same line of road is continued from Merkara, by a ghaut called the Soolea or Sumpajee ghaut, into Canara; by an easy slope along the north declivity of the table land, to the head of the Sumpajee valley,—5 miles west south west of Merkara—from whence there is a gradual slope of not more than 1 foot, in 24 or 25, to Soolea; from the latter place to Bellarypett and Mangalore, the country is nearly level. The distance by this road from Bangalore to Cannanore, and Mangalore, is less than by any of the old tappal, or dawk routes; and greatly facilitates the intercourse between the south of Mysore, the whole of Coorg, and the Malabar Coast.†

\* 1300 feet lower than Merkara.

† Of the other passes into the country the Peria ghaut in Wynaad, is barely practicable.



**Mineral produc-** But little is yet known of the mineral produc-  
**tions.** tions of the country; the iron and steel used by the natives, are procured from Mysore.

**Population.** From the subjoined table the population would appear to be considerably on the increase; owing in a great measure to immigration from the neighbouring countries, on account of a preference for the system of government recently introduced into Coorg.

No accurate accounts of the marriages, the numbers living at different ages, or of the relative proportions of Coorgites foreigners, slaves, &c. can be given, partly from the apathy and ignorance, common to all native states, and partly from a fear of exciting the suspicion of the people, if enquiry was to be pushed too far on such subjects. The number of slaves is however supposed to amount to between 10 and 12000, and of foreigners, the estimates have varied, from 1,500, to 3000.

*Population of Coorg ( Proper ) from the Jummabundee Returns for 3 years.*

| Year.                        | Coorg. |        |       |        | Other classes. |       |        |       | Grand Total. | Births. | Deaths. |        |
|------------------------------|--------|--------|-------|--------|----------------|-------|--------|-------|--------------|---------|---------|--------|
|                              | Men.   | Women. | Boys. | Girls. | Total.         | Men.  | Women. | Boys. |              |         |         | Girls. |
| 1834—                        | 3845   | 4039   | 3413  | 2907   | 14204          | 10531 | 13890  | 8651  | 7293         | 43365   | 57569   | *      |
| 1835—                        | 3602   | 3717   | 3255  | 2704   | 13271          | 14533 | 14599  | 9034  | 7542         | 45709   | 58987   | 2323   |
| 1836—                        | 3955   | 4157   | 3774  | 3141   | 15027          | 15815 | 15803  | 10424 | 8368         | 50410   | 65437   | 3194   |
| Increase in the last year... | 353    | 440    | 519   | 437    | 1749           | 1282  | 1204   | 1390  | 826          | 4701    | 6450    | 871    |
| Decrease .....               |        |        |       |        |                |       |        |       |              |         |         | 577    |

\* No calculation is founded on this year's returns, not being perfectly accurate.

† Part of this increase is from 4354 labourers who have immigrated into the country during last year, the absolute increase is therefore 2,096

From the foregoing table it would appear :

1st.—That the population—exclusive of immigration—has been increasing in the ratio of 3.43 per cent, per annum.

2dly.—That the births, exceed the deaths,—on the mean of 2 years—in the ratio, of nearly 2, to 1.

3dly.—That the number of boys exceeds the number of girls, in the ratio of 37, to 31, but in adults, this is reversed, the females, being to the males, as 41, to 39 nearly: the relative ages however not being given, no deduction can be made to account for this circumstance.

4thly.—The proportion of deaths in the years 1835-6, was 1 in 35. and in 1836-7, only about 1 in 60: the deaths to births in 1835-36 were as 1, to 2 nearly, in 1836-7 as 1, to 3 nearly.

It is impossible to form any idea of the average longevity of the inhabitants, natives having but vague and imperfect notions of dates, they however all agree in stating that men live much longer than women, which they attribute to the early marriages of the latter; that more male children die, than females; and, that mortality among children under one year old is great, which two last statements correspond with similar facts elsewhere.

**Towns & Villages.** The Coorgites have only three villages, or towns properly so called, Merkara, Somwarpett, and Veerajunderpett; the latter being the largest, and principally inhabited by native christians. The members of each family live together to the number of 20, or 30, or even 60 or 70, and when a family becomes too numerous, an additional dwelling is built in the vicinity of the family abode, which is generally on the side of a hill surrounded by wood, and near their Houses. hereditary fields, to which they are much attached.

Their houses are generally substantially built, having thatched roofs, and are kept very clean and comfortable; those of the better sort, form a hollow square, with a small court in the centre. Fuel is abundant in every part of

the country, and upon the whole the people may be said to be in easy circumstances, and are well provided with food, lodging, and raiment; a great equality of feeling prevails among them, and there is but little disparity in point of wealth.

*Clothing.*

Their clothing is in general good, and sufficient; that of the men consists of a turban of white or blue cloth, one or more long gowns, fitting tight round the body and arms, and reaching to the feet when in dishabille, but tucked up as high as the knee when taking exercise, and secured round the waist with a handkerchief or shawl, over which is worn the belt and knife peculiar to the country, and now well known. The gown or coat is usually of thick white cotton stuff,—more rarely blue—with red embroidery on the shoulders; but they prefer broad cloth when able to procure it. The women wear one or more cloths, reaching from the breast, to below the knee; leaving the top of the shoulders naked and they have usually a small white cloth round the head.

*Physical appearance of the Natives.*

The men, as is well known, are a handsome athletic race, usually above the middle height, and almost uniformly well limbed. The women are not so tall in proportion, but stout and well looking, though rather coarse. The complexion of the men varies greatly and the women are comparatively fair.

*Agriculture.*

Agriculture is the universal occupation of both sexes, after labouring all day in heavy rain, during which they are most actively employed, a general practice is, on their return home at night, to wash the entire body with warm water, which they say counteracts the effects of wet, and cold; they are however, not particularly cleanly in their persons.

*Amusements. Customs.*

The principal amusements of the men, are hunting, and shooting; these are followed partly from the necessity of driving away wild animals, who would otherwise destroy their cultivation; and partly from choice. At a parti-

cular season of the year, they hold a solemn dance, from which it is thought unlucky to be absent; the men are the only performers, the women being merely lookers on. It is evidently a species of *pyn-hie*, or war dance, in which there are interludes of single combats, the individuals being armed with a long twig in lieu of a sword, and a shield; the people themselves are quite unable to give any account of the origin of this custom.

A very singular custom exists, which is a sort of community of wives, who are common among the brothers of a family.

On the marriage of an elder brother, his wife is considered the property of all the others, and as the juniors successively take wives, they in turn become common to the rest of the brothers. Some curious particulars connected with this revolting custom, are detailed by Connor. Of its origin little is known but it is said to have been owing to a comparative scarcity of women, in early times, and to have since become sanctioned by custom; they appear to be getting ashamed of it, and, it is accordingly wearing out; it may be mentioned that this custom has tended very much to disseminate the venereal disease; the younger members of the family, who resort occasionally to public women, communicating the disease to the wives of their elder brothers, and thus in succession to the whole family. Until aware of this extraordinary custom, astonishment was excited at frequently finding elderly and respectable people affected with gonorrhœa, and syphilis.

Food.

The diet of the people principally consists of rice, seasoned with onions, garlic, turmeric, and the other usual ingredients of curry, and is not a little restricted by the prejudices of caste, beef being the only kind of meat not used; but their economical habits prevent their consuming much animal food, except what is the produce of the chase; and in the selection of game they are not very particular; as they eat the flesh of monkeys, squirrels and various other animals, not used by Europeans.

They have usually four meals in the day; first in the morning at 6 o'clock, and afterwards at 10, A. M., at 2, P. M., and

again at 6 or 7, in the evening ; at the latter, the principal meal, milk in various forms, but principally butter-milk, is much used. They are not averse to spirits, and on occasions of feasts consume it in large quantities.

*Disease.* The most common diseases are fever, dysentery, asthma, venereal, piles, dropsy, jaundice, splenitis, and phthisis.

*Fever.* Fever is mostly of the intermittent type, and not usually of a severe form ; in the lower and jungly parts of the country, before the commencement of the monsoon, it assumes a more formidable character, and frequently proves fatal. When recovery takes place it is often followed by jaundice, or splenitis ; patients under these circumstances are sure to suffer a relapse the following season, unless change of air is resorted to : Dysentery is also common, and often very fatal, especially among children ; it likewise prevails most extensively in the season preceding the monsoon.

*Phthisis.* Phthisis is often met with, and is said usually to occur between the ages of 20 and 40.

*Variola.* Variola is not unfrequent, and formerly used to be very fatal ; but the Rajah many years ago, had all his subjects vaccinated ; the means adopted for its dissemination being very simple, pins or needles were dipped in virus, and sent to all parts of the country, with directions for the using them. Since our occupation of the country, care has been taken to keep up vaccination, and death from small pox is comparatively rare.

*Scrophula.* Scrophula is very common, usually making its appearance at the age of puberty, in the form of swellings in the neck to which ulceration succeeds.

*Measels.* Measles is common, but not severe ; and scarlet fever is altogether unknown.

*Rheumatism.* Rheumatism is not uncommon, but not very obstinate. Cases of insanity are not unusual ; and idiocy is frequent.

**Venereal diseases.** Venereal disease—both gonorrhœa and syphilis is very common, owing to the circumstances before mentioned, and to the loose state of morality, as regards the intercourse of the sexes. Secondary symptoms are of frequent occurrence, and very obstinate; the people are unacquainted with any remedies for its cure, or alleviation except some vegetables.

Primary syphilitic ulcers approach more nearly to the character of the true Hunterian chancre, than is often seen in more civilized societies; the people maintain that the disease was unknown in the country, in any shape, previous to the occupation of it by the Honorable Company's troops, and give as a reason, that they were not allowed to quit the country; and that strangers were prohibited from entering it.

**Ulcers &c.** Ulcers, and cutaneous diseases are both common and difficult of cure.

**Diseases of women.** The only diseases peculiar to women, are irregularities of the catamenial discharge generally caused by exposure to cold; and they are said to suffer occasionally from dropsical swellings during pregnancy, which produce abortion about the 6th month. Women are considered to be less healthy, and shorter lived than men, attributed to the community of wives above mentioned; as well as to early marriages. The great mortality among children below one year old, is chiefly from bowel complaints, but no diseases are stated to be peculiar to them.

**State of Medical science.** Medicine is in a very rude and simple state; there are no hakeems or persons who practice it exclusively, and most if not all diseases are attributed to the influence of an evil eye, or the anger of the gods\*; curative measures principally consists in prayers, incantations, and offerings to idols.

No prejudice whatever exists against European medicines, or practice, and people resort readily to the medical officer at Merkara, for advice or assistance; like all natives however,

\* The natives rarely admit, that any place is unhealthy; but they say that occasionally, the devil occasions fever of a malignant description in certain places.

they want patience to submit to any lengthened course of treatment, and generally return to their homes, if a cure is not effected in a few days.

*Materia medica.* The *materia medica* though simple, and confined to plants found in the jungles, is not without efficacy in mild cases, particularly of a local description.

The following is a list of their chief "remedies."

| Name.                            | Part used.   | Medical effects.   |
|----------------------------------|--|--|
| Hittee Beejah . . .              | Kernel of fruit. . . .                             | In small doses of 5 or 10 grains, astringent febrifuge; in large doses narcotic and poisonous. |
| Thoomba Geedoh..                 | Expressed juice of the leaves. . . . .             | Expectorant; for coughs.   |
| Kodin Kittolee. . .              | do.  | Febrifuge, diaphoretic, (ordinary fever.)  |
| Nassoomanee Ba-roo. . . . .      | do.  | Febrifuge, (continued fever.)  |
| Seepawaruthoo Sigooroo . . . . . | do.  | Astringent, tonic, (chronic dysentery.)  |
| Poda Bellee . . . . .            | do.  | Sedative, antispasmodic, (in colic.)   |
| Mavin Beejah . . .               | Fruit, bark and root. . . . .                      | Astringent, tonic, vermifuge (in dysentery and worms.)   |
| Gajeegatha Gada..                | Juice of leaves. . . . .                           | Diuretic (in dropsy.)  |
| *Numaree Baroo..                 | Root. . . . .                                      | Febrifuge, diaphoretic (fever and venereal disease.)   |
| Kareematha Sagooroo . . . . .    | Juice of leaves. . . . .                           | Purgative.   |
| Sakee Suppoo . . . .             | do.  | Diuretic (in dropsy.)  |
| Thasula Hoo. . . . .             | Juice of leaves internally and externally. . . . . | Cooling, demulcent, purgative (in ophthalmia and local inflammations.)                         |
| Dalinba Sigooroo..               | Do. internally. . . . .                            | Refrigerant, stomachic.  |
| Havin Sapoo. . . . .             | do.  | Refrigerant (in eruptive diseases.)  |
| †Haleela Beejah..                | Seeds. . . . .                                     | Purgative.   |

*Diseases of cattle.*

Cattle as before observed do not thrive in Coorg; horses are subject in the wet weather, to a disease of the throat resembling laryngitis, which frequently proves fatal in a few hours, even when very active measures are resorted to. The best remedy is bleeding *ad deliquium*, and firing

\* *Periploca Indica* or country Sarsaparilla, a valuable substitute for the more expensive American article.

† Probably the same as the *hirleela-siyah*, a common and very excellent purgative, used in Persia.



the throat\*. The Rajah was always in the habit of sending his horses to the frontiers during the monsoon, and it is said, that even his elephants suffered if kept at Merkara.

Bullocks are subject to the same disease, but in them it comes on more insidiously, and though equally fatal, does not run its course so rapidly as in horses; it generally commences with purging, which is succeeded by swelling of the throat; occasionally when the animal seems about to recover, ulcers form on the legs, and the hoofs drop off. No cure is known for this complaint, which occurs at all seasons of the year.

It seems difficult to assign a cause for the uncongeniality of the climate to these animals; the damp atmosphere alone does not satisfactorily account for it, as the climate of many countries in Europe—England for example—famous for the breed of cattle, horses and sheep, is as damp as that of Coorg, during a portion of the year. Cattle are fed exclusively on dry straw, and grass.

No information has been obtained as to the diseases of plants used as food, either by the people, or the cattle, with the exception of rice, which is subject to blight in particular situations, but is never used as food afterwards.

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## MERKARA.

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Situation. Merkara, or Muddykeree, as it is pronounced by the natives, is the modern capital of Coorg, the fort of

NOTE.—It should have been stated under the head of "Vegetable productions" that an attempt to introduce the tea plant, by seedlings from Calcutta, totally failed, all the plants having withered. This may probably have been owing to want of experience in the cultivators, as a plant given to Colonel Crewe on the Neilgeries, and afterwards transplanted to Manantoddy, and from thence to Merkara, was healthy and covered with blossoms in April 1837.

\* Several valuable horses belonging to officers of the 36th Regiment N. I. having died of this complaint at Merkara in 1834, it has since been the invariable custom to send these animals to Frazerpett or Hoonsoor, in the monsoon. A fine arab brought from Tabreez in Persia which had been in the possession of an officer six years, without a day's illness, was carried off by the disease; he was attacked at 7 in the morning, and died at 9 at night, notwithstanding bleeding, blistering, &c., the attack commenced with wheezing, and difficulty of breathing attended with swelling of the throat which gradually increased, (without however producing any febrile symptoms) till it terminated in suffocation.

which was built by Typoo Sultan A. D. 1782; the ancient capital of the province having been the town of Hallary, five miles north-east of Merkara: it is distant from Madras viâ Seringapatam, and Bangalore, 352 miles, from Bangalore 145, from Mysore 70, and from Cananore 68 miles.

Surrounding  
country &c.

The hills around Merkara, arise abruptly from the surrounding country, forming an oblong table land, at the south-east angle of which is situated Merkara; the fort being built on the levelled summit of a small isolated hill.

On the east and north, the hills have a gentle declivity, their sides being clothed with wood; but on the south they are abrupt, precipitous and nearly naked, descending to the low or Southern division of Coorg, to the depth of from 4 to 600 feet.

On the west, the table land is elevated about 3,000 feet above the low country of Umrsoolea. A remarkable peculiarity of the hills is the extreme narrowness of their terminal ridges, which are frequently only a few feet broad, and descend abruptly on each side. They are all of a rounded form, and none rise more than 2, or 300 feet above Merkara. The table land to the west, is broken into numberless small rounded eminences, like reversed tea-cups, the valleys being filled with wood, forming a succession of very picturesque, and pleasing scenery. A peculiarity of the numerous streams found in these valleys, is that they in general flow to the westward, although their sources in many instances are within a few yards of the declivity of the western ghauts; the country of Coorg resembling in this, as in many of its general features—although on a smaller scale—the western parts of the Neilgherries.

None of the ranges of hills in Coorg appear to possess superior advantages to Merkara itself, in a sanatory point of view.

A small river which falls into the Haringhee rises close to Merkara; there are no lakes, morasses or canals in the neighbourhood.

Water.

Water is supplied partly from the river above-mentioned, and partly from numerous springs in the immediate vicinity of the town and fort, the water from two of which is collected in large stone tanks; and a well of good water also issues from the hill, on which the fort is situated.

Fort and cantonment.

The fort is placed as before observed, on the summit of a naturally isolated hill, which has been partially levelled; the soil being litho-margic earth of the same description, as that generally found throughout the country; it is distant not more than 150 yards from the boundary ridge of the table land on the south, with which it is artificially connected by a mound. On the south and south-west slopes of the hill, and below the fort, are the sepoy's lines, not very regularly disposed, but tolerably clean and airy, having a stream of running water in the valley immediately below them; the huts are of the description usually erected by sepoy's, wattle and mud, with thatched roofs. The regimental bazaar is on the same side of the hill; and on the north side is another artificial mound connecting the hill with the native pettah or great bazaar, which forms a street of good houses, about three quarters of a mile in length, and terminated by two buildings, the tombs of the late Rajahs.

The Fort is an irregular polygon of seven sides, at each of six of the angles of which is a round bastion, and at the seventh, a gate-way; it is surrounded by a single strong wall of stone, about 12 feet high, by 10 thick; with a parapet of masonry 5 feet high, and 4 thick; below the wall on the south, and west sides, is a *fausse-braye*, and an imperfect ditch; the principal gate is in the east front, and there is a sally port in the north-west angle. There is no well or tank within the fort, though a good spring issues from the base of the hill on the north west, which might probably be struck by boring or sinking a shaft\*; great care has been taken in constructing drains, and the fort is at all times perfectly dry and clean.

\* Besides this defect it is considered valueless, as a place of defence, against *disciplined* troops, being commanded from numerous points, within breaching distance; and could moreover be easily escaladed.

The outer gate leads to an oblong square, one side of which is occupied by a public bungalow for travellers, the Dewans' cutcherry, and the jail.

**Jail.** The latter building forms a square, each side of which is 82 feet in length, it encloses a small open court, and is surrounded by a verandah 9 feet wide; it contains, 2 large wards, one 42 feet by 19, the other 28, by 20; and 3 smaller ones, which are usually occupied as an hospital, and as convalescent wards; a kitchen and store room are also attached to it. The wards are all 8 feet high, and have windows 3 feet by 2; the guard room is in front, and the necessary behind, with a deep cess pool adjoining, into which quick lime is thrown at stated intervals, to destroy offensive effluvia. It is a substantial building well adapted for the purposes of a jail, and affords ample accommodation for 100 prisoners.

At the angle of the square is a large and handsome building occupied as a cutcherry, and the Superintendents residence. The second and third gateways being connected, as usual in native forts, by a traverse, lead into the inner square of the fort, which is partly flagged with granite; the south side was formerly occupied by the old palace of the Rajah, but being ruinous, has lately been pulled down.

**Rajah's palace.** Directly opposite the gate-way, is the new palace, a large square substantial building having numerous windows in front, and built much in the style of a french chateau.

The palace is constructed on a plan much superior to the generality of native buildings, though there is a want of light in the upper and back rooms, which formed the zenanah.

The whole upper story, and a portion of the lower front, is allotted as the officers' quarters, and mess-room; and in the rear is the public treasury; there are also numerous store rooms, &c.

**Barracks.** The barracks of the small detachment of European artillery consisting of 22 men, are situated in the lower story of the north-west angle of the palace, fronting outwards;

their barrack room is 23 feet long, by 26 wide, and 13 high, having one large window, and one door; the old hospital and guard room are adjoining, being separated only by a partition.

The barracks are sufficient for the accommodation of the party now occupying them, but could hardly afford room for a greater number. The space in rear of the palace, is occupied by a powder magazine; the cardamon godowns, and two small detached buildings with terraced roofs, which have been converted into solitary cells. The latter are dry and airy, though rather cold in the monsoon; no disease has been traced to them.

**Hospital.** The new hospital lately erected, is about 30 yards from the south curtain of the fort, with which it communicates by a sally port, the space between being the remains of the glacis, part of which has been cut away, to make room for the buildings; but before a good foundation could be obtained a perpendicular escarpment was requisite to be cut to the depth of 15 feet; the floor of the hospital is therefore 15 feet below the foot of the curtain, and the face of the escarpment constitutes a bank of that height immediately in front of the north verandah.

It is a long tiled building consisting of a native, and an European ward, a surgery, and three verandah rooms, enclosed by a verandah 10 feet wide. The native ward is 82 feet, by 21, with a fire place at each end, the doors are 8 feet high, and 4 broad, having swinging glass ventilators above the windows, which are provided with venetians. The walls are 16 feet high.

At the west end is the European ward, 25 feet by 21, with a bath room off the south verandah, the windows are similar to those in the native ward, provided also with venetian shutters, and glass swinging ventilators, there is a fire place also in this ward. A bath room, and a dead room, are attached to the hospital, both of which are  $10\frac{1}{2}$ , by  $8\frac{1}{2}$ ; they communicate with each other, and each has a glass window 4 by 3

feet, facing the south; and there are separate cook rooms for the natives, and Europeans, and also necessaries.

*Population.* The population of Merkara, with the exception of a few of the higher class of natives who occasionally reside there, is composed almost entirely of the military, with their numerous dependents and followers, and Mysoreans, who are generally shop-keepers and tradesmen; the subjoined remarks therefore apply principally to the military.

*Disease.* By far the most prevalent diseases are fevers generally of the intermittent type, and dysentery; next to which in frequency is rheumatism.

*Fever.* Fever, except occasionally in the cold season, is neither severe nor obstinate, yielding to the ordinary remedies; it is generally of the quotidian type, and seldom produces engorgements of the spleen or liver; the exciting cause can generally be traced to exposure to alternations of temperature; for in the monsoon season when the climate is equable, it is rarely seen; but in the cold weather the disease is now and then complicated with congestion, or inflammation of the lungs, and is then much more formidable. Natives bear depletion better in this climate, than in the low country. Europeans are not particularly subject to fever, at any season of the year.

*Dysentery.* Dysentery is generally produced by imprudence in diet, or from sleeping on damp ground; it is exceedingly common among children, but is rarely fatal, except when it has existed for some time previous to applying for assistance. The application of a few leeches to the abdomen, and the use of ipecacuanha with extract of gentian generally checks the disease in a few days.

Few cases of dysentery have been met with in Europeans, these were however obstinate; but when the force first entered the country, it was very prevalent, and severe. The climate appears to be inimical to persons suffering from relaxed bowels, particularly if complicated with congestion of the liver.

**Rheumatism.** Rheumatism is not usually severe, and strange as it may appear, least frequent in the wet season; it now and then becomes necessary to send convalescents from this complaint out of the country for a short time, to prevent relapses.

**Wounds and ulcers.** Wounds and ulcers are exceedingly troublesome, and frequently slow in healing; the latter in particular sometimes resist every plan of treatment, including active constitutional remedies, and require change of air for their cure.

**Cutaneous affections.** Cutaneous diseases are rather common, and somewhat obstinate; psora is very prevalent, and a few cases of leprosy have been seen.

**Cholera.** Cholera has not been known as an epidemic, for many years, but three or four sporadic cases have been met with.

**Variola and varicella.** Variola is not common, vaccination having been pretty extensively practised, though not without great difficulty, as it frequently fails even in the dry season, and in wet weather seldom succeeds.

Varicella is common, but mild.

**Measles and scarlet fever.** Neither measles, or scarlatina, have come under observation.

**Worms.** Worms are very common in children, probably from the use of raw vegetables.

On the whole, as before observed, the climate must be pronounced highly favourable to the European constitution; and but little less so to the natives of the plains, at least after a short residence. There are no diseases which are considered peculiar to any class of the inhabitants.

**Diseases of prisoners.** The most common complaints amongst the inmates of the jail, are dysentery and fever, both, as might be anticipated, more obstinate and severe, than in the military, or free inhabitants. Subsequent to the late insurrection in Canara when the number of prisoners was greatly increased, they

amounted for some time to 500 and upwards, and were consequently a good deal crowded, the mortality was very high, 14 having died within a very short time, every mode of treatment appeared to be equally unavailing. Most of the sufferers were natives of Umrsoolia below the ghauts, and the complete change of climate and food, doubtless had much effect in producing both the disease, and the unfavorable result.

The following tables shew the nature and amount of disease and mortality which have occurred amongst the native troops at this station from 1835, when first garrisoned, till 1843, a period of nine years; and also amongst a body of prisoners kept here since 1836, a period of eight years.



Table exhibiting the number of admissions and deaths amongst the Native troops stationed at Merkara, during a period of nine years, from 1835 to 1843 inclusive.

| Aggregate strength.<br>8902.                        |                                     | Admitted.      | Died.  | Admissions<br>from each class. | Deaths from<br>each class. | Per centage of<br>sick to strength. | Per centage of<br>deaths to sick. |
|---|-------------------------------------|----------------|--------|--------------------------------|----------------------------|-------------------------------------|-----------------------------------|
| CLASSES.  | DISEASES.                           |                |        |                                |                            |                                     |                                   |
| Fevers.....   | Febrisephemera                      | 337            | 1      | 1625                           | 19                         | 18.254                              | 1.169                             |
|   | „ intermit quot.                    | 1217           | 10     |                                |                            |                                     |                                   |
|   | „ tertiana.....                     | 30             | 1      |                                |                            |                                     |                                   |
|   | „ remittens....                     | 23             | 5      |                                |                            |                                     |                                   |
|   | „ com: cont....                     | 18             | 2      |                                |                            |                                     |                                   |
|   | Cholera.....                        | 7              | 4      | 7                              | 4                          | 0.078                               | 57.142                            |
| Diseases of<br>the abdom-<br>inal vis-<br>cera..... | Diarrhœa.....                       | 156            | 3      | 456                            | 13                         | 5.122                               | 2.850                             |
|   | Dysentaria acu-<br>ta et chronica.. | 101            | 9      |                                |                            |                                     |                                   |
|   | Colica.....                         | 93             | 0      |                                |                            |                                     |                                   |
|   | Obstipatio.....                     | 10             | 0      |                                |                            |                                     |                                   |
|   | Dyspepsia.....                      | 63             | 1      |                                |                            |                                     |                                   |
|   | Splenitis.....                      | 6              | 0      |                                |                            |                                     |                                   |
|   | Gastritis.....                      | 3              | 0      |                                |                            |                                     |                                   |
| Hæmorrhœis...<br>Hepatitis.....                     | 20<br>4                             | 0<br>0         |        |                                |                            |                                     |                                   |
| Diseases of<br>the lungs.                           | Catarrhus.....                      | 54             | 2      | 98                             | 13                         | 1.100                               | 13.265                            |
|   | Asthma.....                         | 27             | 0      |                                |                            |                                     |                                   |
|   | Phthisis pulmo-<br>nalis.....       | 2              | 2      |                                |                            |                                     |                                   |
|   | Pneumonia.....                      | 9              | 5      |                                |                            |                                     |                                   |
|   | Hydrothorax...<br>Dyspnœa.....      | 2<br>4         | 2<br>2 |                                |                            |                                     |                                   |
|   | Diseases of<br>the brain.           | Apoplexia..... | 2      |                                |                            |                                     |                                   |
| Epilepsia.....                                      |                                     | 8              | 1      |                                |                            |                                     |                                   |
| Paralysis.....                                      |                                     | 17             | 1      |                                |                            |                                     |                                   |
| Mania.....  |                                     | 23             | 1      |                                |                            |                                     |                                   |
| Tetanus.....  |                                     | 1              | 1      |                                |                            |                                     |                                   |
| Delirium Tre-<br>mens.....                          |                                     | 1              | 0      |                                |                            |                                     |                                   |
| Eruptive fe-<br>vers.....                           | Variola.....                        | 2              | 0      | 58                             | 1                          | 0.651                               | 1.724                             |
|   | Varicella.....                      | 40             | 0      |                                |                            |                                     |                                   |
|   | Rubeola.....                        | 13             | 1      |                                |                            |                                     |                                   |
|   | Erysipelas.....                     | 3              | 0      |                                |                            |                                     |                                   |
| Dropsies....  | Anasarca.....                       | 51             | 6      | 52                             | 6                          | 0.584                               | 11.538                            |
|   | Ascites.....                        | 1              | 0      |                                |                            |                                     |                                   |
| Rheumatic<br>affections.                            | Rheumatacutus<br>et chronicus..     | 374            | 5      | 374                            | 5                          | 4.201                               | 1.336                             |
| Venereal af-<br>fections..                          | Syphilis primi-<br>tiva.....        | 47             | 0      | 163                            | 1                          | 1.831                               | 0.613                             |
|   | „ consecutiva..                     | 42             | 0      |                                |                            |                                     |                                   |
|   | Gonorrhœa.....                      | 31             | 0      |                                |                            |                                     |                                   |
|   | Hernia humora-<br>lis.....          | 41             | 1      |                                |                            |                                     |                                   |
|   | Stricture ure-<br>thræ.....         | 2              | 0      |                                |                            |                                     |                                   |
| Specific dis-<br>eases.....                         | Lepra.....                          | 6              | 0      | 65                             | 2                          | 0.730                               | 0.076                             |
|   | Elephantiasis..                     | 3              | 0      |                                |                            |                                     |                                   |
|   | Dracunculus...                      | 22             | 0      |                                |                            |                                     |                                   |
|   | Atrophia.....                       | 28             | 2      |                                |                            |                                     |                                   |
|   | Scrophula.....                      | 6              | 0      |                                |                            |                                     |                                   |
|   | Morbi oculorum                      | 43             | 0      | 43                             | 0                          | 0.483                               | 0.000                             |
|   | „ Cutis.....                        | 603            | 0      | 603                            | 0                          | 6.773                               | 0.000                             |
|   | Other diseases..                    | 1535           | 2      | *1535                          | 2                          | 17.243                              | 0.130                             |
| Total.....  |                                     | 5131           | 72     | 5131                           | 72                         | 57.638                              | 1.403                             |

\* Of this number were Phlogosis 490, Ulcus 286 and 1 death.

## JAIL OF MERKARA.

*Table exhibiting the number of Admissions and Deaths of the convicted prisoners. from each class of disease, from 1836 to 1843 inclusive.*

| Aggregate strength.<br>446.                         |                       | Admitted. | Died. | Total admissions<br>from each class. | Total deaths<br>from each class. | Per centage of<br>sick to strength | Per centage of<br>deaths to sick. |
|---|-----------------------|-----------|-------|--------------------------------------|----------------------------------|------------------------------------|-----------------------------------|
| CLASSES.  | DISEASES.             |           |       |                                      |                                  |                                    |                                   |
| Fever.....  | { Febrisephemera..... | 59        | 1     | 445                                  | 9                                | 99.775                             | 2.022                             |
|   | { „ int. quot.....    | 380       | 6     |                                      |                                  |                                    |                                   |
|   | { „ remittens. ...    | 1         | 0     |                                      |                                  |                                    |                                   |
|   | { „ com: cont... ..   | 5         | 2     |                                      |                                  |                                    |                                   |
|   | Cholera.....          | 4         | 2     | 4                                    | 2                                | 0.896                              | 50.000                            |
| Diseases of<br>the abdo-<br>minal vis-<br>cera..... | { Diarrhœa.....       | 63        | 3     | 197                                  | 8                                | 44.170                             | 4.060                             |
|   | { Dysentery.....      | 64        | 3     |                                      |                                  |                                    |                                   |
|   | { Colica.....         | 49        | 0     |                                      |                                  |                                    |                                   |
|   | { Dyspepsia.....      | 16        | 0     |                                      |                                  |                                    |                                   |
|   | { Icterus.....        | 1         | 1     |                                      |                                  |                                    |                                   |
|   | { Hœmorrhoids.....    | 1         | 0     |                                      |                                  |                                    |                                   |
|   | { Splenitis.....      | 2         | 1     |                                      |                                  |                                    |                                   |
| { Hepatitis.....                                    | 1                     | 0         |       |                                      |                                  |                                    |                                   |
| Diseases of<br>the lungs                            | { Cynanche.....       | 5         | 0     | 51                                   | 4                                | 11.434                             | 7.843                             |
|   | { Catarrhus.....      | 31        | 1     |                                      |                                  |                                    |                                   |
|   | { Asthma.....         | 13        | 2     |                                      |                                  |                                    |                                   |
|   | { Pneumonia.....      | 2         | 1     |                                      |                                  |                                    |                                   |
| Diseases of<br>the brain.                           | { Cephalalgia.....    | 5         | 0     | 11                                   | 2                                | 2.466                              | 18.181                            |
|   | { Epilepsia.....      | 6         | 2     |                                      |                                  |                                    |                                   |
| Eruptive fe-<br>vers.....                           | { Variola.....        | 0         | 0     | 8                                    | 0                                | 1.748                              | 0.000                             |
|   | { Varicella.....      | 8         | 0     |                                      |                                  |                                    |                                   |
|   | Rheumatismus.         | 65        | 2     | 65                                   | 2                                | 14.573                             | 3.076                             |
| Dropsies....  | { Anasarca.....       | 2         | 2     | 3                                    | 3                                | 0.672                              | 100.000                           |
|   | { Ascites.....        | 1         | 1     |                                      |                                  |                                    |                                   |
| Venereal af-<br>fections..                          | { Syphilis.....       | 2         | 0     | 4                                    | 0                                | 0.896                              | 0.000                             |
|   | { Gonorrhœa.....      | 1         | 0     |                                      |                                  |                                    |                                   |
|   | { Hernia.....         | 1         | 0     |                                      |                                  |                                    |                                   |
| Specific<br>diseases..                              | { Lepra.....          | 1         | 1     | 2                                    | 2                                | 0.448                              | 100.000                           |
|   | { Atrophia.....       | 1         | 1     |                                      |                                  |                                    |                                   |
|   | Morbi oculorum        | 11        | 0     | 11                                   | 0                                | 2.466                              | 0.000                             |
|   | „ cutis.....          | 47        | 0     | 47                                   | 0                                | 10.538                             | 0.000                             |
|   | Other diseases..      | 265       | 0     | *265                                 | 0                                | 59.417                             | 0.000                             |
| Total..   |                       | 1113      | 32    | 1113                                 | 32                               | 249.551                            | 2.875                             |

Per centage of deaths to strength 7.174.

\* Of this number were Phlogosis 77, ulcers 122.

**FRAZERPETT.**

**General description.** Frazerpett having been occupied for a considerable time, by a large detachment of sappers and miners employed in making the great road to Merkara, a few words respecting it may be considered interesting. It occupies nearly the site of a fort commenced by Tippoo Sultan, called Jafferabad, or Khooshat-nuggur, which however was never finished, and is now in ruins ; situated on the left bank of the Cauvery, in a bend formed by a sudden turn of the river, opposite the Mysore frontier, and 19 miles east by north from Merkara, its elevation being about 1300 feet above the sea.

**Soil.** The soil is alluvial, but is well drained ; it is surrounded by jungle, not however very dense.

From its position the climate is hotter than that of Merkara, but during the monsoon it is extremely pleasant, as very little rain falls there, and the heat of the sun is moderated by constant clouds, and light fogs.

**Climate.** The nights are cool and pleasant, nor is the sun ever very oppressive at any season, except for an hour or two at mid-day ; and notwithstanding its being surrounded by jungle, it is decidedly a very healthy spot. The disease of the detachment have been few in number, chiefly slight fever, and bowel complaints, and attended with but a very trifling mortality.

**METEOROLOGICAL REGISTER.**

The instruments with which the subjoined observations were made, were placed in a detached building, over the inner gate of the fort, perfectly isolated, and open to atmospheric influences on every side. The roof is covered with a thick thatch, and the sides venetianed ; the interior is four and half feet square ; the instruments being suspended on a frame in the centre, three and a half feet from the ground.

The barometer was made by Newman ; and of the thermometers, one was made by Jones, one by Robinson, and a third by Dolland, all agreeing exactly in their indications. The pluviometer (Howards) is kept on the outside of the same platform.

*Monthly Abstract of the daily atmospherical Register kept at*

| Months.      | Mean temperature Thermometer. Fahrenheit. |          | Mean pressure Barometer corrected to 32°. Fahrenheit. |         | Mean of hygrometer at 10 A. M. |             |                       |          |            | Total rain—inches. | Mean evaporation in 24 hours. | Prevailing winds.                            |  |
|--------------|---|----------|---|---------|--------------------------------|-------------|-----------------------|----------|------------|--------------------|-------------------------------|--|--|
|              | 6 A. M.                                   | 10 A. M. | 10 A. M.  | 5 P. M. | Wet Bulb.                      | Difference. | Quantity of moisture. | Dryness. | Dew point. |                    |                               |  |  |
| 1835.        |   |          |   |         |                                |             |                       |          |            |                    |                               |  |  |
| June.....    | 66.7                                      | 69.9     |   |         |                                |             |                       |          |            | 44.77              | 20                            | W. N. W.                                     |  |
| July.....    | 65.4                                      | 67.7     | 26.060  | 25.970  | 18.5                           | 1.28        | 223.1                 | 28.4     | 17.2       | 20.80              | 039                           | W. N. W.                                     |  |
| August.....  | 65  | 68       | 26.007  | 25.980  | 18.6                           | 1.          | 220.                  | 24       | 17.4       | 23.25              | 030                           | W. N. W.<br>W. N. W.<br>E. N. E.<br>N. N. E. |  |
| September..  | 64  | 68       | 26.050  | 26.010  | 18.3                           | 1.8         | 210.                  | 40       | 17.        | 13.53              | 030                           | W. S. W.<br>E. N. E.                         |  |
| October..... | 65  | 68       | 26.070  | 26.020  | 18.8                           | 2           | 220.                  | 40       | 16.5       | 10.24              | 035                           | E. N. E.                                     |  |
| November...  | 63  | 67       | 26.115  | 26.080  | 17.7                           | 2.8         | 200.                  | 60       | 14.5       | 2.18               | 045                           | E. N. E.<br>N. N. E.                         |  |
| December...  | 56  | 64       | 26.140  | 26.100  | 13.3                           | 3.4         | 140.                  | 75       | 8.9        |                    |                               | N. E.  |  |
| 1836.        |   |          |   |         |                                |             |                       |          |            |                    |                               |  |  |
| January..... | 53  | 64       | 26.160  | 26.100  | 11.                            | 4.1         | 100.                  | 120      | 2.2        |                    |                               | N. N. E.                                     |  |
| February...  | 56  | 69       | 26.172  | 26.135  | 12.5                           | 7.          | 115.                  | 160      | 2.         |                    | 100                           | E. N. E.                                     |  |
| March.....   | 61  | 73       | 26.140  | 26.070  | 13.4                           | 8.5         | 130.                  | 154      | 1.1        | 02                 | 105                           | N. E. N. W.                                  |  |
| April.....   | 64  | 75       | 26.103  | 26.056  | 18.3                           | 5.2         | 210.                  | 134      | 13.        | 187                | 057                           | W. N. W.                                     |  |
| May.....     | 64  | 72       | 26.090  | 26.040  | 19.2                           | 3.2         | 212.                  | 64       | 16.        | 248                | 052                           | N. N. W.                                     |  |
| Gen. means.  | 61.9                                      | 68.      | 26.07   | 26.051  | 16.3                           | 3.6         | 188.                  | 81.      | 11.4       |                    | 052                           |  |  |

Total of rain 119.14.

*Merkara, from 1st June 1835, to 31st May 1836.*

General Remarks.

- The monsoon set in on the 31st May, but was not violent till towards the end of the month. The mornings were damp and foggy, heavy showers occurring in the evening. The last six days the rain fell in torrents.
- The monsoon continued very mild during this month, with intervals of fair weather. The equability of the temperature (the daily range not exceeding 4°) is remarkable.
- The early part of the month was foggy, with little rain, on the 11th the monsoon set in and continued with little intermission, till the end of the month.
- The rain continued steady till towards the end of the month, when the wind changed to the east and the rain diminished. The period of the equinox was marked by heavy thunder storms.
- The early part of the month was damp and foggy with occasional rain, about the 20th the wind settled on the N. E. quarter, and it became colder. Heavy rain from N. E. on the last few days.
- The north-east monsoon gradually cleared off, and may be said to have terminated about the 17th with a heavy thunder storm; the weather then became cold and foggy with high winds.
- The early part of the month continued foggy and damp, but afterwards cleared up, and became bright and fine, with very high winds, mornings and evenings very cold.
- The weather throughout this month was bright and clear, mornings and evenings cold, heat of the sun tempered during the day by a constant cold wind from N. E., often amounting to a storm.
- Much the same as last month, but rather hotter in the middle of the day, and less wind. The hygrometrical state of the atmosphere varied remarkably (dew point varying from 13.2 to 7. without evident cause.
- First part of the month dry and warm, latter cloudy and close; a good deal of thunder. Dew point varied from 16.8 to  $\times$  17.
- Occasionally dry and cool at Merkara; much rain fell all round, a few thunder storms.
- A most delightful month, weather cool, clear and fine, much less rain than usual, a great deal of sheet lightning with but little thunder.

*Monthly Abstract of the daily atmospherical register kept at*

| Months.       | Mean of Thermometer. |          | Mean of Barometer at 10 A. M. corrected. | Mean of hygrometer at 10 A. M. |             |                       |          |            | Total fall of rain | Prevailing winds. |
|---------------|----------------------|----------|--|--------------------------------|-------------|-----------------------|----------|------------|--------------------|-------------------|
|               | 6 A. M.              | 10 A. M. |  | Wet Bulb.                      | Difference. | Quantity of moisture. | Dryness. | Dew point. |                    |                   |
| 1836.         |                      |          |  |                                |             |                       |          |            |                    |                   |
| June.....     | 62                   | 68       | 25.980                                   | 19.1                           | 1.6         | 226.4                 | 45       | 17.2       | 20.84              | W. N. W.          |
| July.....     | 62                   | 64.2     | 26.025                                   |                                |             | Saturated.            |          |            | 23.74              | W. N. W.          |
| August.....   | 60                   | 63       | 26.020                                   |                                |             | Do.                   |          |            | 24.74              | W. N. W.          |
| September ..  | 62                   | 67       | 26.075                                   | 17.2                           | 1.6         | 205.4                 | 33       | 15.6       | 7.02               | W. N. W.          |
| October. .... | 63                   | 68       | 26.125                                   | 16.1                           | 6.1         | 149.4                 | 129.6    | 8.7        | 0.55               | W. N. W.          |
| November...   | 60                   | 70       | 26.120                                   | 15                             | 7.2         | 128.                  | 151.     | 5.4        | 1.55               | E. N. E.          |
| December. ..  | 58                   | 70       | 26.180                                   | 12.2                           | 7.8         | 97.6                  | 154.4    | 1.5        | 0.07               | N. E.             |
| 1837.         |                      |          |  |                                |             |                       |          |            |                    |                   |
| January.....  | 56                   | 69       | 26.175                                   | 11.6                           | 7.2         | 98.9                  | 139.5    | 0.3        | None               | N. E.             |
| Feberuary...  | 60                   | 74       | 26.210                                   | 15                             | 8.8         | 112.                  | 188.4    | 2.5        | None               | E. N. E.          |
| March.....    | 64                   | 76       | 26.170                                   | 16.4                           | 8.9         | 124.                  | 197.     | 4.6        | 1.29               | Variable.         |
| April.....    | 65                   | 78       | 26.130                                   | 18.2                           | 9.3         | 139.                  | 218.     | 7.2        | 0.21               | Do.               |
| May.....      | 63                   | 72       | 26.070                                   | 20                             | 4.1         | 211.                  | 93.      | 16.2       | 7.64               | W. N. W.          |
| Gen. means.   | 61.25                | 69.91    | 26.106                                   |                                |             |                       |          |            |                    |                   |

Total of rain 87.04.

*Merkara from 1st June 1836, to 31st May 1837.*

## General Remarks.

The monsoon was later than usual on setting in, and can hardly be said to have begun till the 19th. The quantity of rain also did not amount to half the fall in the corresponding month of last year. For a considerable portion of the month, the air has been so saturated with moisture, as to afford no indication by the hygrometer. The troops continue (as usual at this season) very healthy.

The monsoon has continued without intermission during the month, and the weather has been most disagreeable, exercise being almost totally precluded. The troops are very healthy, out of 12 cases in hospital, 9 are accidents.

The monsoon has continued without intermission throughout the month, with almost constant rain or fog, and high winds, the air being intensely damp, and the sun scarcely ever visible. The troops continue extremely healthy.

The monsoon continued but with diminished violence, when the weather cleared up, and has since been fine and clear with occasional fogs, and thunder storms; the wind is drawing gradually round to the northward, and the nights are becoming cold, a few cases of rheumatism and fever among natives, have presented themselves, attended with determination to the head and chest; this is usual on all changes of the weather.

The weather during this month has been unusually fine dry and clear, with high cold winds from the N. E. so much so, as to occasion apprehensions of a deficiency of water for cultivation. The number of cases of slight fever, and rheumatism among natives, has also as usual in sudden changes of weather, considerably increased, but they are generally mild and yield to the usual simple remedies.

The N. E. monsoon may be said to have almost failed in this quarter. The weather during the month except a few casual showers, has been clear dry and cold. Fevers are becoming less frequent, and the troops are in general healthy.

The weather during the whole of this month, with the exception of two light showers, and occasional fogs, has been dry and clear, the mornings and evenings cold, with towards the latter part, storms of wind from E. and N. E., the troops continue very healthy, a few cases of rheumatism and fever of a slight description notwithstanding.

The weather during the past month has been uniformly clear cold and dry, with very high cold winds. The number of cases of fever has some what increased, with a tendency in some instances to congestion of the lungs.

The weather throughout this month has been intensely dry and latterly very warm, the season being more than six weeks earlier than usual. The scanty monsoon of last year now begins to be severely felt, causing drought all over the country. The troops continue healthy.

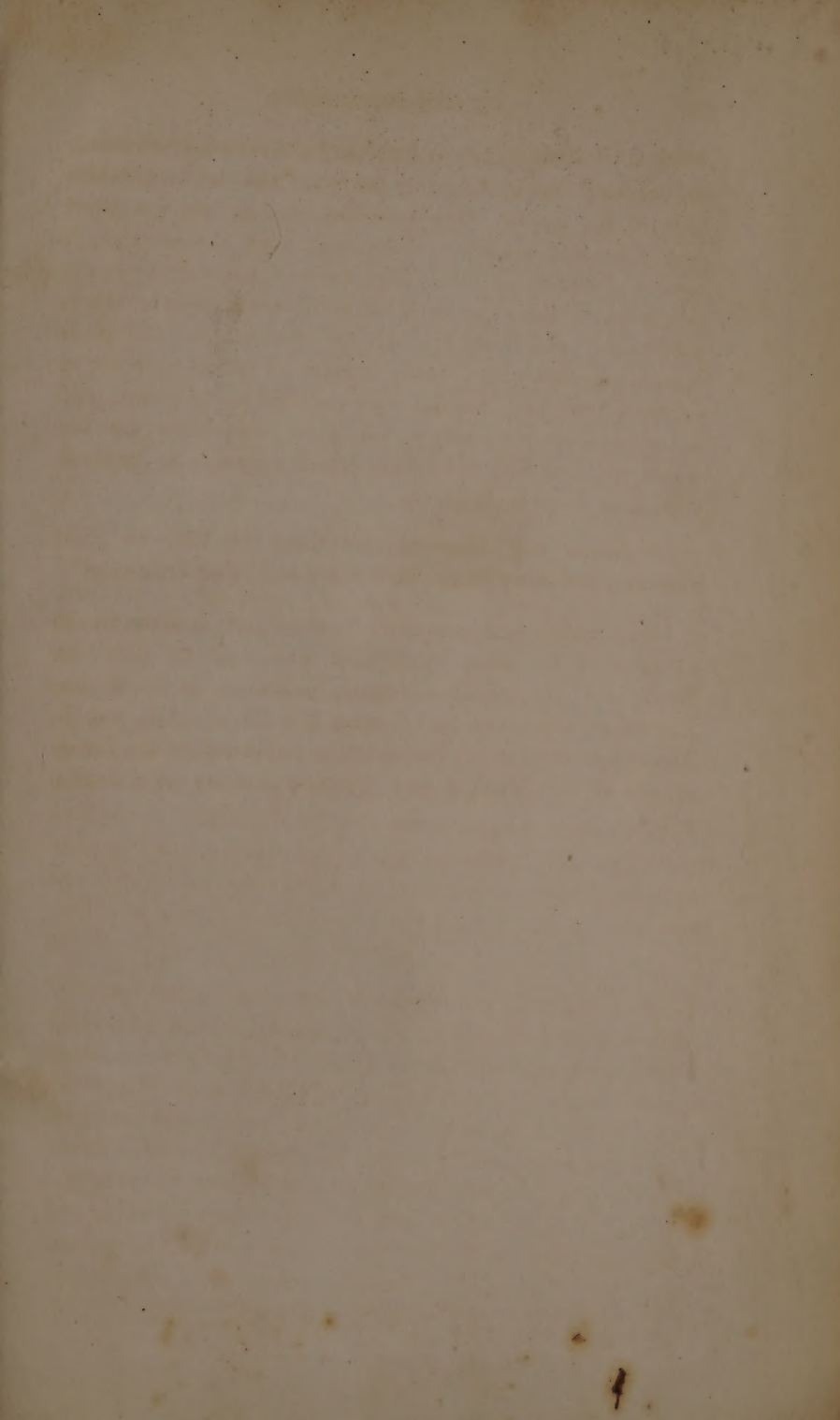
The weather during this month has been unusually close and hot, at least six weeks in advance of the two preceding seasons, water very scarce in many places; a considerable number of cases of fever with determination to the chest occurred after the showers, on the 5th and 6th, since which the troops have been as usual healthy.

This month has been warm and pleasant; but few showers have fallen, which is unusual at this season.

The early part of the month was warm and close, with a few heavy showers. The monsoon set in on the 25th (unusually early) with a heavy thunder storm, but as yet only a small quantity of rain has fallen, slight fever and bowel complaint, have been common among the followers and prisoners in the jail, but have not prevailed among the military.







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